

Back to Basics

David L. Presuhn

Manager

Configuration Management
and Product Definition Integration
Boeing Commercial Airplanes

A word from our sponsor...



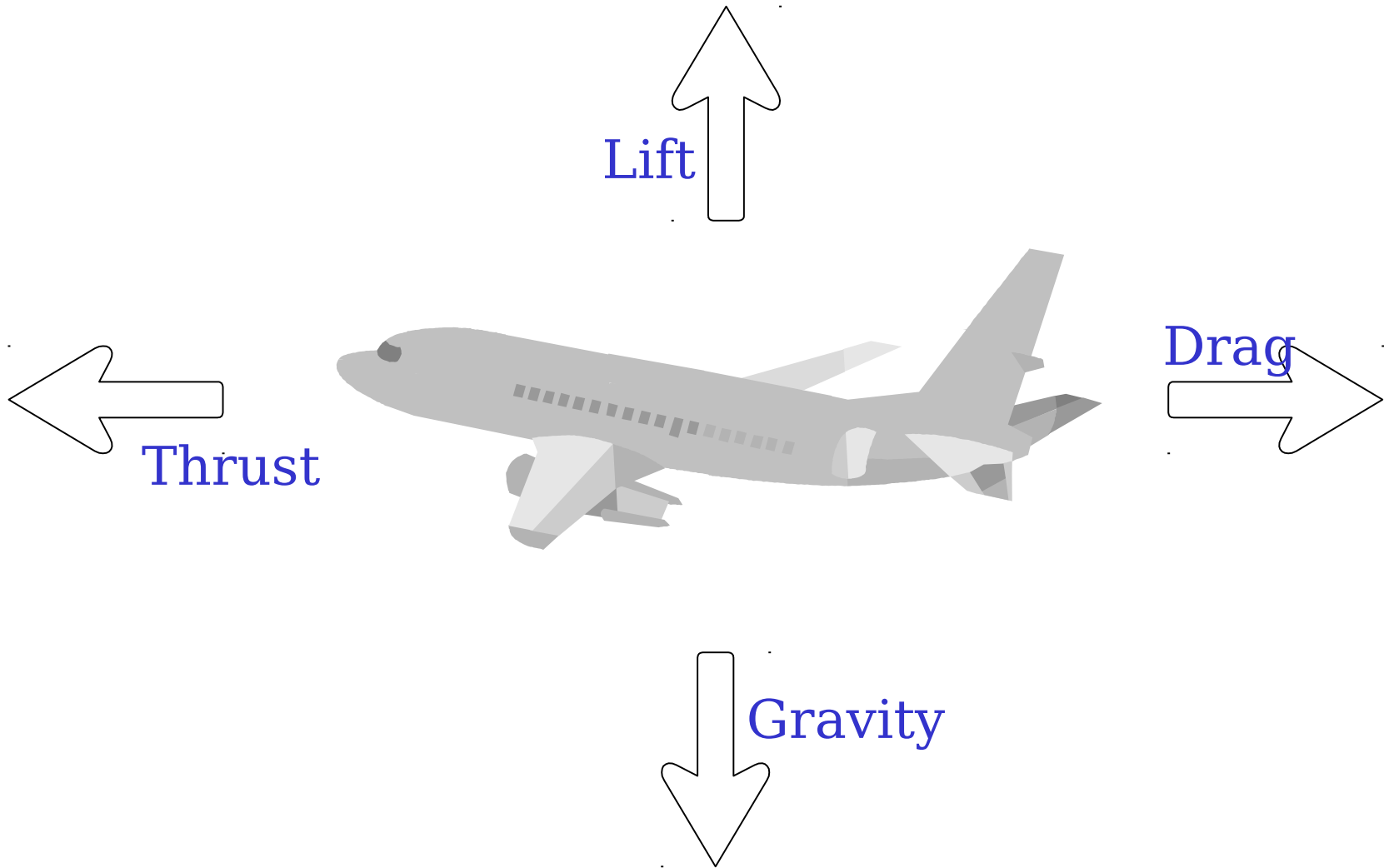
First master the fundamentals



Throw the ball
Catch the ball
Hit the ball
Run the bases

Then learn to execute the double play and the suicide s

The fundamentals of our product*



* Comprised of 2 million parts flying in close formation



The achievement of the Wright brothers is not so much powered flight, but controlled powered flight



Execution of the fundamentals
combined with minimum essential
controls is the basis for process stability
and improvement.

**EIA 649
Based
Configuration
Management**

**AS9100
Quality Management
System**

**Simplified
Enterprise
Process
Architecture**

**Increased
Globalization
of Design
and
Manufacture
and Support
Services**

**Capability
Maturity
Models**

**Increased
Delegation
Authority
from FAA**

Process Fundamentals

- Well understood requirements
- Process documentation appropriate to the users
- Minimum essential controls
- Skilled and motivated workforce
- Continuous improvement

Configuration Management Requirements

- Planning and Management
- Configuration Identification
- Configuration Change Management
- Configuration Status Accounting
- Configuration Verification

Engineering & Product Integrity Owned Processes and SSPI Process Owner Reports

[BCA Process Index Chart](#)

[Document Tree Template](#)

For changes to this list please contact [Tom Curtis](#) at 425-965-1198.
(For Wichita contact [Wes Handerson](#) at 316-526-4000.)

Complete Document Lists
[in Numerical Order](#)
[Sorted By Process Number](#)

[Document Tree](#)

[Development Steps](#)

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

[Document Administrators](#)

Search By Process ID:

Process Title	Process Owner	Puget Sound Focal	Wichita Focal
Advanced Technology - Manage (521)	Starkus, Frank D		
Aerodynamics Engineering Analysis - Perform (52)	Habrason, Ronald J	III, Charles S	
Aircraft Maintenance Manual Data, Puget Sound – Update and Approve (544)	Bateman, Paul W		
Airplane Operations - Demonstrate (41)	Cashman, John E		
Airplane Systems - Design and Integrate (53)	Lefevre, Stanley W	Royalty, Christina	
Applied Loads and Dynamics - Analyze (505)	Avery, Thomas E		
Conduct Airplane Tests (5)	Zanatta, Gerald J	Zanatta, Gerald J	
Configuration Management Requirements - Develop (11)	Presuhn, David L	Presuhn, David L	



Commercial Airplanes Document & Process Index



[Purpose and Guidelines](#) - [Change Control Information](#)

Last Updated: 07/09/2003

[Click here to view change control information](#)

[Printable Version](#)

[View alphabetized process list](#)

Lead Business

[Establish the Management System](#)

[Develop and Manage the Plan](#)

Create & Acquire Business	Define Product & Services	Manage Supply Chain	Produce & Deliver Product	Perform Services
Contract Commitments and Documentation	Define Product Concepts	Manage Work Movement	Control of Non-Conforming Product/Process	Provide Technical Support to Airlines
Marketing Strategies and Research	Manage Service Requirements	Manage Supplier Partners	Perform Join, Installation & Test	Provide Field Services
Selling Process	Develop Functional Design & Design Requirements	Integrate E-Buy/SCM (Enabling Supply Chain Management)	Fabricate Major Assemblies	Provide Warranty & Supplier Product Support
Develop & Manage Global Enterprises	Define Product Configuration	Manage Propulsion Systems Supplies	Fabricate Parts & Commodities	Provide Retrofit & Modification Services
	Develop and Analyze Physical Design	Provide Materials Management	Deliver Product	Provide Flight Services
	Define Manufacturing Plan & Tooling Requirements		Control Manufacturing Processes	Provide Spares Engineering Support
	Define, Produce and Maintain Tooling		Perform Product/Process Acceptance	Provide Spares Operations Support
	Verify and Validate Products		Manage Capacity & Manufacturing Schedules	Provide Maintenance Services
	Manage and Deliver Product Definition Data		Provide Customer Coordination	Define and Implement Post Production / Delivery Manufacturing & Tooling Plan
	Provide Engineering Services			Maintain Repair Station Approvals
	Implement Manufacturing & Tooling Plan			

Provide Common Internal Processes and Services

[Provide HR Support](#)

[Provide Financial Services](#)

[Provide Process Management Services](#)

[Manage Information Systems](#)

[Provide Safety, Health & Environmental Affairs Support](#)

[Research and Develop Processes and Technology](#)

[Maintain Business Records](#)

[Perform Internal Audit](#)

[Develop & Provide Quality Metrics](#)

[Perform Corrective and Preventive Action](#)

Products and Services

Engineering and Product Integrity



For changes to the Products and Services list contact [Greg Smith](#) at 425-237-6875 or [George Cross](#) at 425-965-0279

List by Product/Service Name - Complete List

Select List by Product/Service Name:

[ALL](#) - [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

Search by Keyword in Product/Service Name:

Keyword Search

List by Product/Service	List by Process Title	List by Process Number	Senior Manager Rollup	Process Owner Rollup	Product/Service Metrics
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Product/Service Name

Process Title (Process No.)

Process Owner

Product/Service Contact

Type	Requirement Document	Process Document	Document Tree	WSA Loaded/ Question Lvl	PMM Level Criteria	Plan ECD	Plan Status	Greenbook Flow
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Description

Action Interface Memorandum

Process Title: Product Definition Activities - Plan & Control (10)

Process Owner: Presuhn, David L

Product/Service Contact: [Charles W Norton](#)

Product	Requirement Document	Process Document	Document Tree	WSA	PMM Level	N/A - PMM Level 3	N/A - PMM Level 3	Greenbook Flow Not Identified
	PRQ-88	SPI-388	DT10-1	7/28/2002 Minimum Not in WSA v2.0		Obtained	Obtained	
	N/A	N/A						

Description: AIm provide a standard process for communicating technical interface information among the following entities: Boeing, Associate divisions within Boeing, Customer airlines, Aircraft modification subcontractors, parts subcontractors and other groups.

Administrative Agreement (AA)

Process Title: Specifications (SCDs) - Develop Off-Load (184)

Process Owner: Hofferber, Donald D

Product/Service Contact: [Jeff Sipes](#)

Product	Requirement Document	Process Document	Document Tree	WSA	PMM Level	N/A - PMM Level 3	N/A - PMM Level 3	Greenbook Flow Not Identified
	PRQ-3751	SPI-286_BDS-1191	DT32-2	2/27/2003 Flux Not in WSA v2.0		Obtained	Obtained	
	N/A	N/A						

Description: Administrative Agreements are issued concurrent with Specification Control Drawings to define how Engineering and SM&P will manage the development of a program.

Advance Document Revision Notice (ADRN)

Process Title: Product Standards - Control (13)

Engineering Documentation

- Documents must be aligned to the Process Index and approved by the assigned process owner to be maintained.
- Requests for document creation/changes are sent to the **Engineering Documentation Group**.

Issues Management System (IMS)

- Provides a single vehicle for compiling, monitoring, and resolving business process issues and changes related to improvement of processes for all Engineering organizations.
- Issues may address ideas, suggestions, or problems related to processes, documentation, or systems hardware or software.
- Issues may originate from any end user (initiator), but are submitted only by IMS process subject matter experts who represent the participating groups or organizations.

Workgroup Self-Assessment (WSA)

In general, the self-assessment process promotes the following:

- Personal and workgroup knowledge of and compliance with documented requirements.
- Process effectiveness.
- Identification of compliance issues.
- Process maturity.
- Process management.

Specifically, workgroup self-assessment promotes the following:

- Process management and improvement.
- Data generation and collection on process effectiveness, process issues, and process discipline at the workgroup level for the products they produce.
- Awareness of compliance with company, statutory, regulatory, and configuration management standards and requirements.

Define Process Plan

Process Maturity Model (PMM)

Process Owners have:		Work Groups are:
▪ best practices identified. ▪ process performance visibility. ▪ improvements sponsored. ▪ portfolio management of process and computing tools.	4 Improving	▪ reviewing process performance. ▪ focusing on <i>root causes</i>. ▪ sponsoring process improvements. ▪ moving down a learning curve. ▪ not working fire drills.
▪ document tree with linkage of requirements to process to product. ▪ self assessment available. ▪ user training/consultation available.	3 Stabilized	▪ <i>following their processes</i>. ▪ ONE WAY or know why not. ▪ recording process issues. ▪ talking to their customers
▪ baseline practices identified ▪ processes documented and available.	2 Defined	▪ <i>knowledgeable</i> about their processes and where to find the documents. ▪ identifying focals for processes.
▪ broken processes. ▪ not been assigned ownership.	1 Initial Level	▪ <i>inventing processes on the fly</i>.

Engineering Quality Assessment (EQA)

Help BCA Engineering succeed through independent assessment of engineering projects and processes

- Periodic assessment of process health
- Specific assessment of identified projects
- Development of engineering employees through EQA experience
- Provide foundation for transition to delegated organization

EQA functions

- Fact finding assessment
- Non-Advocate independent review
- Consultation

EQA on CMMI Specific Practices

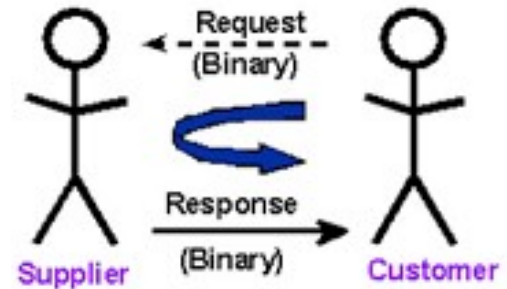
- ✓ SP 1.1-1 Objectively Evaluate Processes
- ✓ SP 1.2-1 Objectively Evaluate Work Products and Services
- ✓ SP 2.1-1 Communicate and Ensure Resolution of Non-compliance Issues
- ? SP 2.2-1 Establish Records

EQA on CMMI Generic Practices

- ✓ GP 2.1 Establish an Organizational Policy
- ✓ GP2.2: Plan the Process
- ✓ GP2.3: Provide Resources
- ✓ GP2.4: Assign Responsibility
- ✓ GP2.5: Train People
- ✓ GP2.6: Manage Configurations
- ✓ GP2.7: Identify and Involve Relevant Stakeholders
- ✓ GP2.8: Monitor and Control the Process
- ✓ GP2.9: Objectively Evaluate Adherence
- ✓ GP2.10: Review Status with Higher Level Management
- ✓ GP3.1: Establish a Defined Process
- ☺ GP3.2: Collect Improvement Information
- ? GP4.1: Establish Quantitative Objectives for the Process
- ? GP4.2: Stabilize Sub-process Performance
- GP5.1: Ensure Continuous Process Improvement

Lean tactics simplify processes

- Understand how value flows
(value stream mapping)
- Standardize work procedures
(Spread work evenly over the system)
- Put visual controls in place
(Checklists)
- Put everything at point of use
(Process metrics)
- Radically redesign products and business processes



Complexity is not inherently evil,
but

complex systems fail in complex
ways.

*Making anything simpler requires
hard work.*

Back to Basics